

A decorative background graphic on the left side of the slide features a dense network of blue and red lines and dots, resembling a data visualization or a neural network. The lines flow from the top left towards the bottom right, with some lines curving and looping back. The dots are small and scattered along the lines.

Talent Intelligence and Reskilling strategies for Industrial Automation Industry's critical job roles:

1. Automation Controls Engineer

Conceptualized and Developed: February– 2022

The objective of this document is to provide talent acquisition insights like talent size, top skills in-demand, talent cost, job role future growth, experience split of talent, gender diversity, etc. for the sample job roles in Industrial Automation Industry, and further showcase Reskilling strategies for disrupted/digitally impacted job roles

Agenda

Pages

3-5

- Job role demand and location analysis across Industrial Automation Industry

7-13

- Location & Talent Intelligence for 'Automation Controls Engineer'

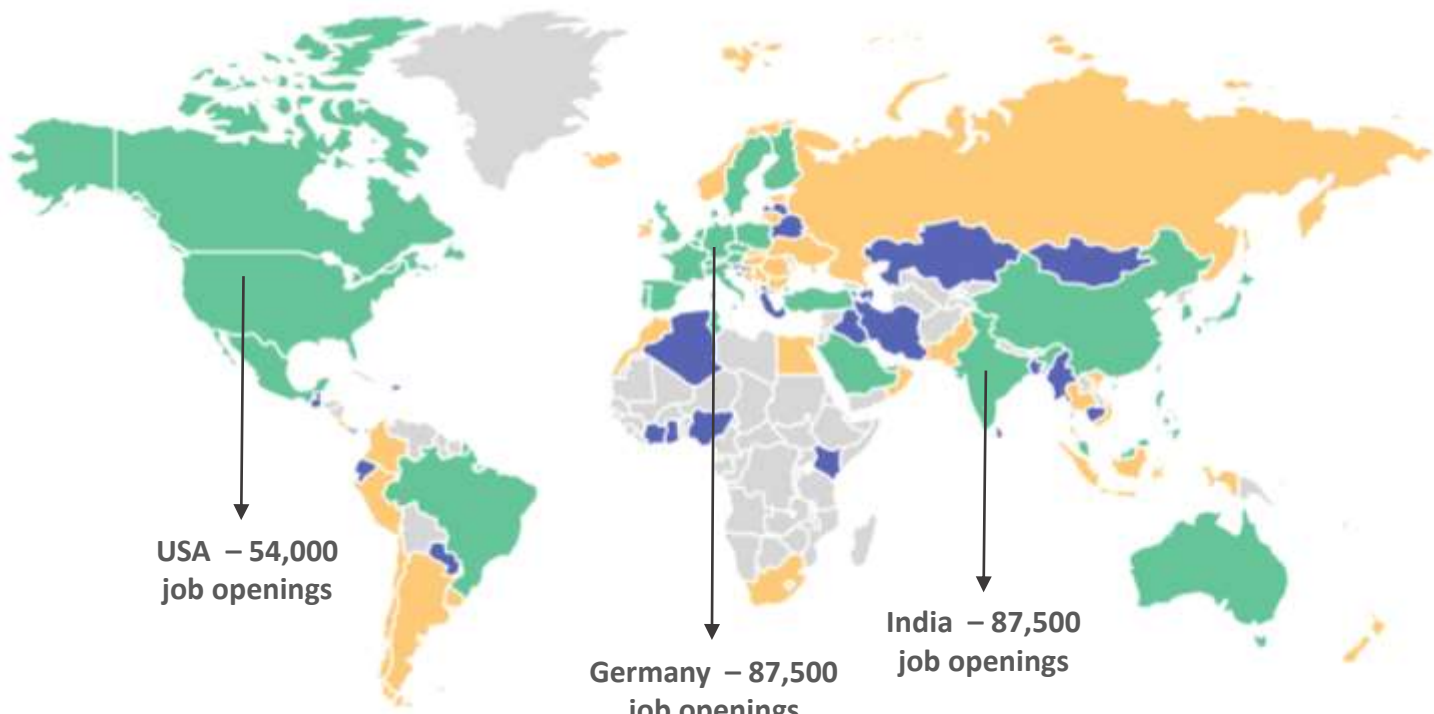
15-18

- Reskilling approach to meet the Digital Skills Gap

Industrial Automation has currently a huge demand for tech and non-tech talent globally

Global Talent demand in Industrial Automation Industry

**Total job openings:
210,000**



No. of IA Companies HQ
H M L

Job Openings (January 2022)

Global key in-demand job roles in Industrial Automation Industry

- | | | |
|------------------------------|----------------------------|----------------------------|
| Computer Vision Developer | Financial Analyst | Automation Technician |
| R&D Engineer | Field Systems Engineer | PLC Programmer |
| Automation Project Manager | Risk Analyst | Mechanical Design Engineer |
| Pricing Analyst | PLM Consultant | Solutions Architect |
| Embedded Engineer | Data Analyst | Business Analyst |
| Process Engineer | Program Manager | Industrial Sales Engineer |
| Full Stack Engineer | Automation Product Manager | Production Specialist |
| Data Scientist | Manufacturing Engineer | Account Manager |
| Automation Controls Engineer | Application Engineer | Automation QA Engineer |

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Note: Draup tracks the insights for 4,500+ job roles across Industries; Draup also tracks the insights related to Talent at company level for all the industries
 Source: Respective career pages and job portals were used to find job openings, Draup platform

But, for acquisition of high demand job roles, Industrial Automation companies are currently competing with their peers across global locations

| High demand job roles | Job Growth (Last 1 month vs last 3 month) | Total global job postings in IA (in last 12 months) |
|-------------------------------------|--|--|
| Automation Project Manager | ↑ 10% | 24,000 |
| Automation Controls Engineer | ↑ 10% | 10,800 |
| R&D Engineer | ↑ 9% | 3,000 |
| Full Stack Engineer | ↑ 9% | 9,000 |
| Automation Product Manager | ↑ 8% | 12,000 |
| Business Analyst | ↑ 8% | 3,000 |
| Data Analyst | ↑ 7% | 33,000 |
| Program Manager | ↑ 6% | 4,800 |



Top IA Firms hiring similar job roles

Top Companies Hiring Intensity

High Medium Low

Source: Draup

Draup has further analysed the above highlighted roles in details

Note: Draup tracks the insights for 4,500+ job roles across Industries; Draup also tracks the insights related to Talent at company level for all the industries
Source: Draup Talent platform

Job role overview – Automation Controls Engineer Talent

Automation Controls Engineer is responsible for designing, developing, and implementing solutions that control dynamic systems

Key Workloads:

- ➔ Generate HMI screens for complex machinery and provide usage documentation
- ➔ Generated new PLC programs using TIA (Total Integrated Automation)
- ➔ Upgrade and troubleshoot existing control systems

Qualification:

- ➔ Bachelor's or Master's Degree in EEE/ EIE/ Instrumentation & Controls related courses



Evolution of Automation Controls Engineer skillsets

| Sample Job Role Skillsets | Traditional Skills | Emerging Skills |
|---|--|--|
| Software Skills | <ul style="list-style-type: none"> • Basic Coding • SQL Queries | <ul style="list-style-type: none"> • HMI, PAC, PLC Controls • Programming Languages – R, Python |
| Hardware Skills | <ul style="list-style-type: none"> • Basic Hardware Tools | <ul style="list-style-type: none"> • PID Control • Pneumatics & Field Control |
| Quality Control & Analysis | <ul style="list-style-type: none"> • Manual Performance Testing | <ul style="list-style-type: none"> • SPC Charts, CAPA, IMP, OCAP • FMEA & Fault Tee Analysis |
| Management Skills | <ul style="list-style-type: none"> • Cross functional BU interactions | <ul style="list-style-type: none"> • Cross Team Collaboration • Agile Project Management |
| Analytics & Visualization Skills | <ul style="list-style-type: none"> • Data Management • Data Reporting Via Excel | <ul style="list-style-type: none"> • Data Analytics • Visualization Tools - Tableau, Power BI |
| Research | <ul style="list-style-type: none"> • Market Research • Concept-to-market Execution | <ul style="list-style-type: none"> • Demand Prediction • ERP Systems |

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To avoid competition from peers and better understand the talent landscape for high demand job roles, Draup has leveraged its Talent Intelligence platform to provide IA's HR leaders insights around 'Location Intelligence' and 'Reskilling' for sample job roles

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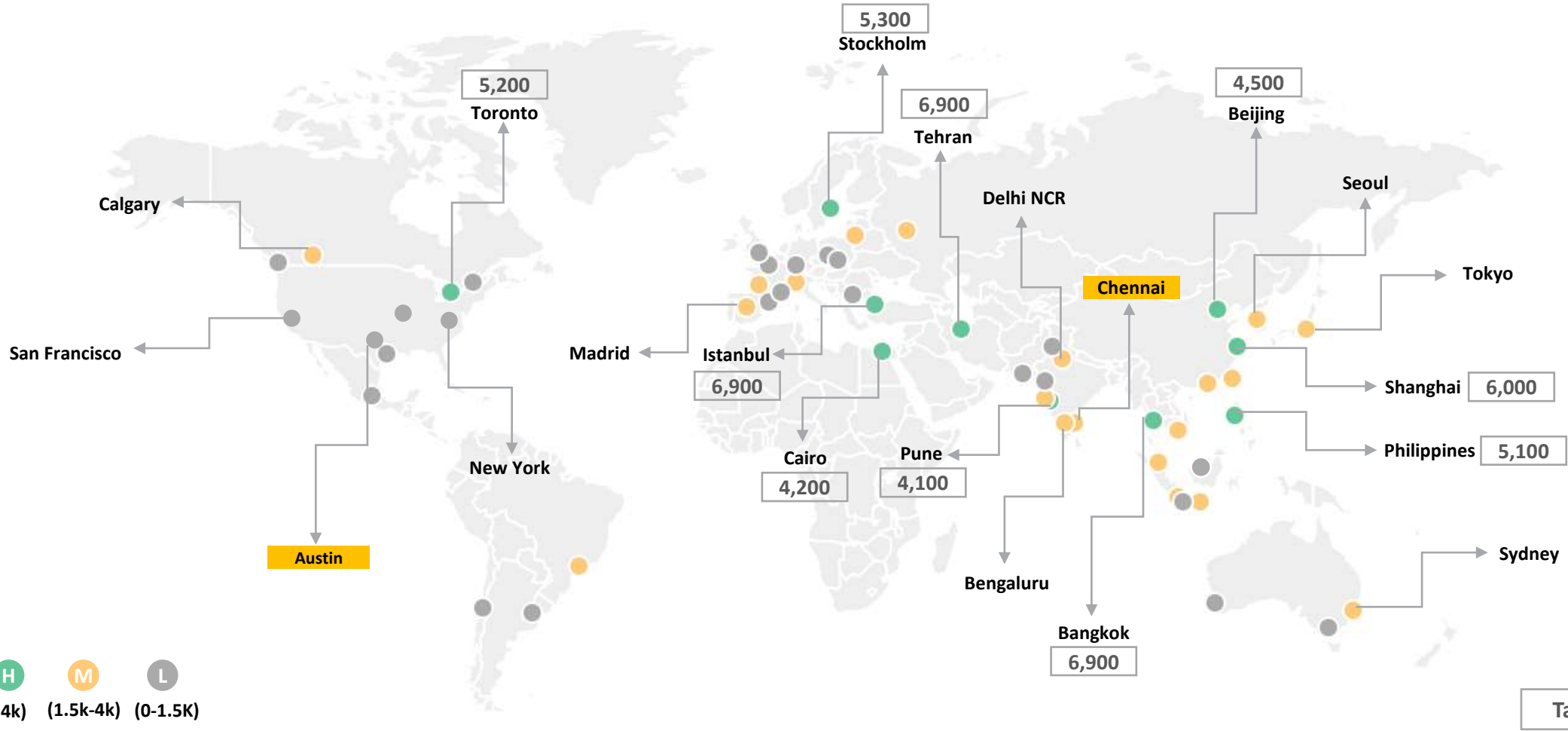
- **Location & Talent Intelligence for 'Automation Controls Engineer'**

15-18

- Reskilling approach to meet the Digital Skills Gap

Global hotspot overview – Automation Controls Engineer: Bangkok, Tehran, Shanghai, Stockholm, and Toronto are the top 5 locations with highest talent availability

Global hotspots for 'Automation Controls Engineer'



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(k=1,000) **H** (>4k) **M** (1.5k-4k) **L** (0-1.5K)

Talent Size

Based on the job demand of all locations, Draup has provided deep dive of a sample emerging locations (Austin, and Chennai)

Source: All the above insights are tracked in real time on the Draup platform, Draup's proprietary Talent module tracks holistic insights related to Talent Acquisition, Workforce planning, Learning & Development (Reskilling/Upskilling initiatives)

Talent Acquisition insights for 'Automation Controls Engineer' role in 'Austin'



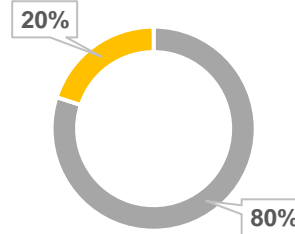
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Talent size

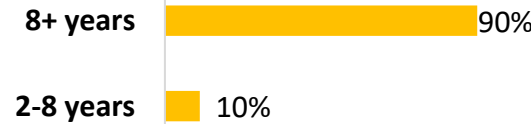


USD 84 K

Median Talent cost in United States



Gender Diversity



Talent Size Breakup by Seniority



0.69%

Projected Talent size growth rate for 3 years (CAGR)



USD 95,500

Talent cost

Top Employers with ~50% Talent

| | | |
|--|--|--|
| | | |
| | | |

Top Universities offering relevant Courses

| | | |
|--|--|--|
| | | |
| | | |

Top skills:

◆ Niche Size of talent with specific skill H M L

| | | | |
|-------------------------------------|---------------------------|----------------|-----------------|
| Programmable Logic Controller (PLC) | Control Systems Design | Automation | Process Control |
| AutoCAD | Allen-Bradley | Sensors | Debugging |
| RSLogix | Variable Frequency Drives | Wonderware | PLC Programming |
| Factorytalk | HMIS | Fanuc Software | ControlLogix |

Digital Tech Stack:

Talent Size in Tech Stack H M L

| | | |
|-----------------|----------|----------|
| Microsoft Visio | MATLAB | MySQL |
| SIMATIC WinCC | AutoCAD | LabVIEW |
| Studio 5000 | Autodesk | PTC Creo |
| VantagePoint | RSLogix | ASP.NET |

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Sample Profiles overview of 'Automation Controls Engineer' talent in 'United States' based on specific skillset criteria, and location-based Talent











Draup has provided sample Automation Controls Engineer Talent profiles based on various hiring parameters





PLC Skillset Talent





Austin based Talent





 **Jacob Grabowski**  [LinkedIn Profile](#)  San Francisco
Current :  Automation Controls Engineer at Tesla





 **Doug Nordquist**  [LinkedIn Profile](#)  Minnesota
Current :  Senior Controls Engineer at Tesla





 **Akash Babu**  [LinkedIn Profile](#)  Dayton
Current :  Automation Engineer at Rockwell Automation





 **Keith Davis**  [LinkedIn Profile](#)  Fremont
Current :  Controls Engineer at Tesla





 **Quinlan McNeal**  [LinkedIn Profile](#)  Houston
Current :  Controls Engineer at Rockwell Automation





 **Hussien AlAhmad**  [LinkedIn Profile](#)  California
Current :  Controls Engineer at Tesla





 **Angel Guajardo**  [LinkedIn Profile](#)  Austin
Current :  Sr. Automation and Controls Engineer at ICON

 **CHANDRAKANT**  [LinkedIn Profile](#)  Austin
Current :  Sr. Automation Controls Engineer at Samsung

 **Magdalena Solarz**  [LinkedIn Profile](#)  Austin
Current :  Automation Controls Engineer at Tesla

 **Alejandro Martinez**  [LinkedIn Profile](#)  Austin
Current :  Sr. Controls Engineer at Tesla

 **Akshit Garg**  [LinkedIn Profile](#)  Austin
Current :  Automation Controls Engineer at Bright Machines

 **Yuliana Ramos**  [LinkedIn Profile](#)  Austin
Current :  Automation Controls Development Engineer at Tesla

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Note: Draup's internal modules such as 'Draup Talent Module, Draup Rolodex, Draup Universe, & External Sources' was used to analyze talent profiles based on past and current designation, location and skills. Draup has a corpus of 155 Million+ real time job professionals who are tagged based on various parameters such as Promotion Odds, Hiring propensity, Relocation, etc. Draup's Rolodex feature helps Enterprises in targeted hiring for 4,500+ job roles across 2,500 global MSAs





Sample Profiles overview of 'Automation Controls Engineer' talent in 'United States' based on overall years of experience, and Qualification











Draup has provided sample Automation Controls Engineer Talent profiles based on various hiring parameters





Overall
4+ Years
Experience



Master's OR
Ph.D.
Qualification
& College

 **Ryan Smith**  [LinkedIn Profile](#)  Fremont
Current :  Sr. Automation Controls Engineer at Tesla





 **Dominic Francia**  [LinkedIn Profile](#)  California
Current :  Lead Automation Controls Engineer at Divergent 3D





 **Mike Webb**  [LinkedIn Profile](#)  Austin
Current :  Staff Automation Controls Engineer at Tesla





 **Devon Walker**  [LinkedIn Profile](#)  Austin
Current :  Staff Automation Controls Engineer at Tesla





 **Marc Turner**  [LinkedIn Profile](#)  Austin
Current :  Principal Engineer at Emerson





 **Robert Stock**  [LinkedIn Profile](#)  Austin
Current :  Sr. Principal Engineer at Emerson





 **Huang Borth**  [LinkedIn Profile](#)  Houston
Current :  Controls Engineer at Emerson

 **Eric Burlee**  [LinkedIn Profile](#)  New York
Current :  Senior Engineer at Emerson

 **Mike Terlesky**  [LinkedIn Profile](#)  Houston
Current :  Sr. Automation and Controls Engineer at SpaceX

 **Guang Qu**  [LinkedIn Profile](#)  New Jersey
Current :  Automation Controls Engineer at Comar LLC

 **Chandler Williamson**  [LinkedIn Profile](#)  Kansas
Current :  Controls Systems Engineer at Johnson Controls

 **Todd Williams**  [LinkedIn Profile](#)  Alabama
Current :  Controls Engineer at SMP Automotive

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Note: Draup's internal modules such as 'Draup Talent Module, Draup Rolodex, Draup Universe, & External Sources' was used to analyze talent profiles based on past and current designation, location and skills. Draup has a corpus of 155 Million+ real time job professionals who are tagged based on various parameters such as Promotion Odds, Hiring propensity, Relocation, etc. Draup's Rolodex feature helps Enterprises in targeted hiring for 4,500+ job roles across 2,500 global MSAs

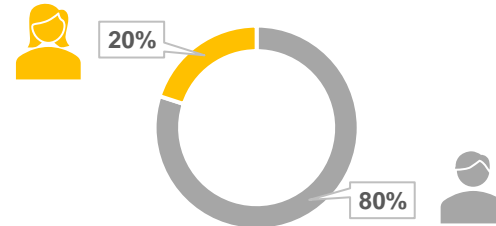
Talent Acquisition insights for 'Automation Controls Engineer' role in 'Chennai'



Talent size



Median Talent cost in India



Gender Diversity



Projected Talent size growth rate for 3 years (CAGR)



Talent cost



Talent Size Breakup by Seniority

Top Employers with ~50% Talent

| | | |
|--|--|--|
| | | |
| | | |

Top Universities offering relevant Courses

| | | |
|--|--|--|
| | | |
| | | |

Top skills:

◆ Niche Size of talent with specific skill **H** **M** **L**

| | | | |
|---------------------------------------|-----------------------------|------------------|-------------------|
| ◆ Programmable Logic Controller (PLC) | ◆ Control Systems Design | ◆ Automation | ◆ Process Control |
| ◆ AutoCAD | ◆ Allen-Bradley | ◆ Sensors | ◆ Debugging |
| ◆ RSLogix | ◆ Variable Frequency Drives | ◆ Wonderware | ◆ PLC Programming |
| ◆ Factorytalk | ◆ HMIS | ◆ Fanuc Software | ◆ ControlLogix |

Digital Tech Stack:

Talent Size in Tech Stack **H** **M** **L**




| | | |
|-------------------|------------|------------|
| ◆ Microsoft Visio | ◆ MATLAB | ◆ MySQL |
| ◆ SIMATIC WinCC | ◆ AutoCAD | ◆ LabVIEW |
| ◆ Studio 5000 | ◆ Autodesk | ◆ PTC Creo |
| ◆ VantagePoint | ◆ RSLogix | ◆ ASP.NET |

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Draup has provided sample 'Automation Controls Engineer' Talent profiles based on various hiring parameters

PLC Skillset Talent





Manikandan Anbu  [LinkedIn Profile](#)  Bengaluru
 Current :  Senior Controls Engineer at Bastian Solutions






Saransh Sahai  [LinkedIn Profile](#)  Faridabad
 Current :  Senior Industrial Controls Engineer at APADIX






Alyster Elroy  [LinkedIn Profile](#)  Bengaluru
 Current :  PLC/ Controls Engineer at BMM Automation






Vijayabaskara Raja  [LinkedIn Profile](#)  Chennai
 Current :  Project Engineer at Cogent Technologies






Prakash Sivasakthi  [LinkedIn Profile](#)  Chennai
 Current :  Systems Control Engineer at Keystone



Bhuvanesh P  [LinkedIn Profile](#)  Chennai
 Current :  Automation and Controls Engineer at MEL Systems



Nahaz VM  [LinkedIn Profile](#)  Thane
 Current :  Sr. Project Engineer at Sarla Technologies






Sivapragasam  [LinkedIn Profile](#)  Bengaluru
 Current :  Project Control Engineer at Bastian Solution






Pavan kumar  [LinkedIn Profile](#)  Andhra
 Current :  Automation software Developer at Siemens






Narayanan N  [LinkedIn Profile](#)  Chennai
 Current :  Automation Engineer at Yokogawa



Praveen Kumar  [LinkedIn Profile](#)  Chennai
 Current :  Automation Engineer at Intech Systems



Eswar Guru  [LinkedIn Profile](#)  Chennai
 Current :  Automation Engineer at Rapidtek Controls

Chennai based Talent

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Sample Profiles overview of 'Automation Controls Engineer' talent in 'India' based on overall years of experience, and Qualification



Draup has provided sample 'Automation Controls Engineer' Talent profiles based on various hiring parameters

Overall
4+ Years
Experience



Yogesh Shinde

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current : Sr. Controls and Automation Engineer at GM



Praneeth N.M.

✉ [LinkedIn Profile](#)

📍 Chennai

Current : Lead Engineer – Controls at Barry Wehmiller



Lakshmanan

✉ [LinkedIn Profile](#)

📍 Chennai

Current : Sr. Automation Engineer at DE SMET Engineers



PURUSHOTHAMAN

✉ [LinkedIn Profile](#)

📍 Chennai

Current : Controls Engineer at Signode



Chirag Birve

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current : Controls Engineer at BFW Automation



Kousik Mukherjee

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current : Controls Engineer at Siemens



Harsha Mathur

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current : Controls Engineer 2 @ Honeywell



Sridharan B

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current : Senior Automation controls Engineer at GM



Purva Patil

✉ [LinkedIn Profile](#)

📍 Bengaluru

Current : Senior Engineer at Robert Bosch Engineering



Rushikesh Deshmukh

✉ [LinkedIn Profile](#)

📍 Pune

Current : Controls Engineer at Baker Hughes



Sameer Sawant

✉ [LinkedIn Profile](#)

📍 Pune

Current : Senior Test Automation Engineer at Johnson Controls



Ranjith Kumar.M

✉ [LinkedIn Profile](#)

📍 Pune

Current : Senior Controls Engineer at Vanderlande

Master's OR
Ph.D.
Qualification
& College

Note: Draup's internal modules such as 'Draup Talent Module, Draup Rolodex, Draup Universe, & External Sources' was used to analyze talent profiles based on past and current designation, location and skills. Draup has a corpus of 155 Million+ real time job professionals who are tagged based on various parameters such as Promotion Odds, Hiring propensity, Relocation, etc. Draup's Rolodex feature helps Enterprises in targeted hiring for 4,500+ job roles across 2,500 global MSAs

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15-18

- Reskilling approach to meet the Digital Skills Gap

Key reasons for Reskilling compared to Hiring

To provide viable career path for disrupted roles

1.37 Million

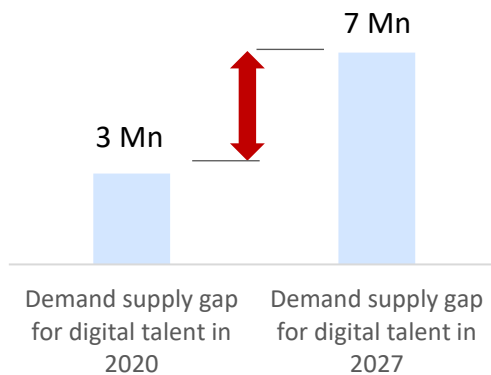
jobs¹ projected to be displaced fully out of their roles in the next decade

Cost savings

20-50%

Cost savings² per employee with Reskilling compared to external recruitment

To address the huge digital supply demand gap



2.3x
Global deficit³ of digital talent in 2027 compared to 2020

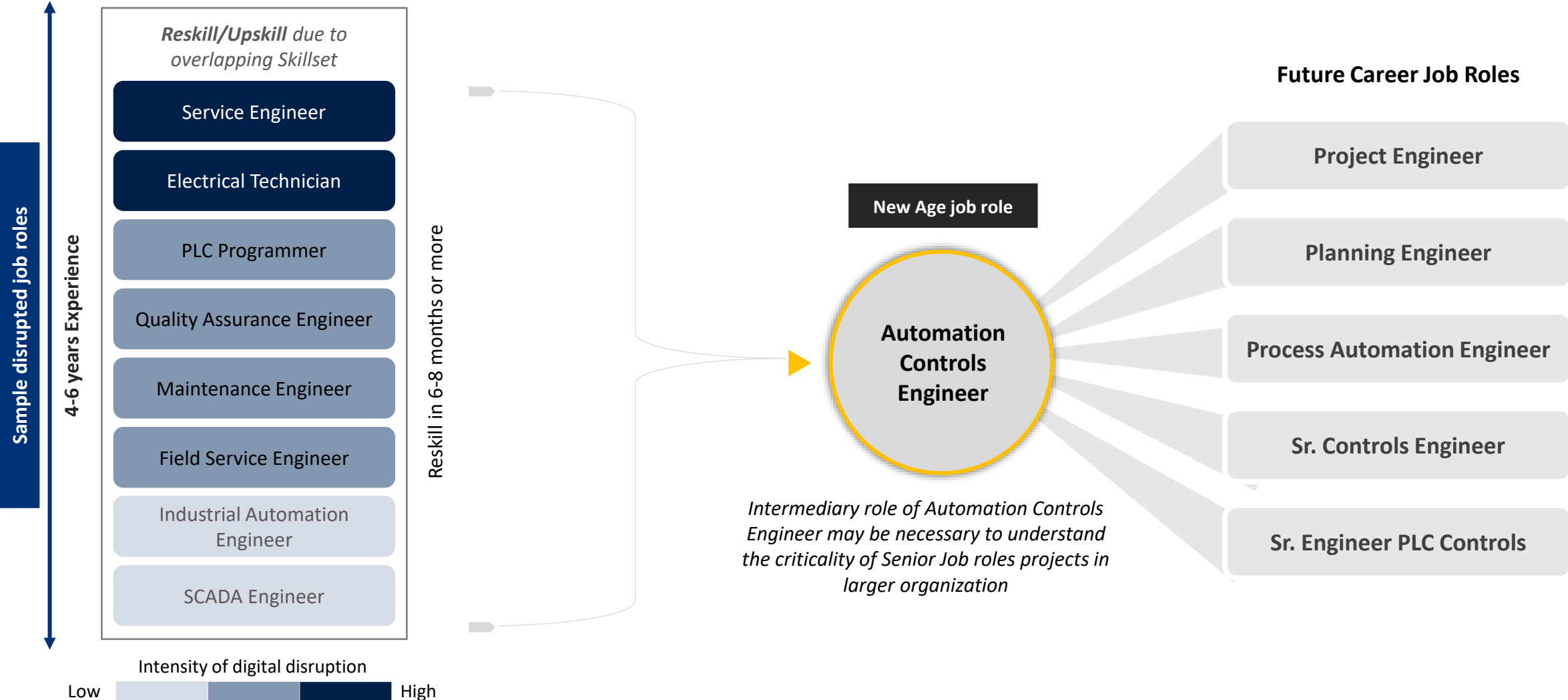
To increase Employee satisfaction

86%

Employees⁴ around the Globe demand New Skills Training from their Employers

To meet the unmet demand for New Age job roles by Reskilling/Upskilling the existing traditional or adjacent talent pool to provide a viable career path

Sample disrupted job roles can be reskilled to in-demand 'Automation Controls Engineer' profession and progress to various lucrative senior roles over time



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Note: Existing Skills and Core skill gaps for Reskilling/Upskilling propensity have been identified for 4,500+ job roles through the analysis of relevant JDs from a dataset of over 1 Million+ Job Descriptions.

Reskilling Propensity Analysis: As a long-term strategy, Industrial Automation firms should reskill/upskill disruption-prone workforce for in-demand role like Automation Controls Engineer



Sample Reskilling Propensity Index (RPI) of existing talent in the firms who can transform into New Age job roles

| Job roles that can be Upskilled/Reskilled (Experience required: 4+ years) | Sample Parameters ¹ to analyse different skill gaps and career transition trends | | | | | Desired role |
|---|---|------------------------|-------------------------------|-------------------------------------|------------------|------------------------------|
| | Technical Proficiency | Functional Proficiency | Specific Soft Skills Overlap | Observed Career Transitions | Compensation Gap | |
| | Software, Hardware & Testing Tools | Project Management | Leaderships & Team Management | Transitioning into desired job role | | |
| Industrial Automation Engineer | High | High | High | High | Low | Automation Controls Engineer |
| PLC Programmer | Medium | High | Medium | High | Low | |
| Quality Assurance Engineer | Medium | Medium | Medium | Medium | High | |
| Service Engineer | Low | Low | Medium | Medium | High | |

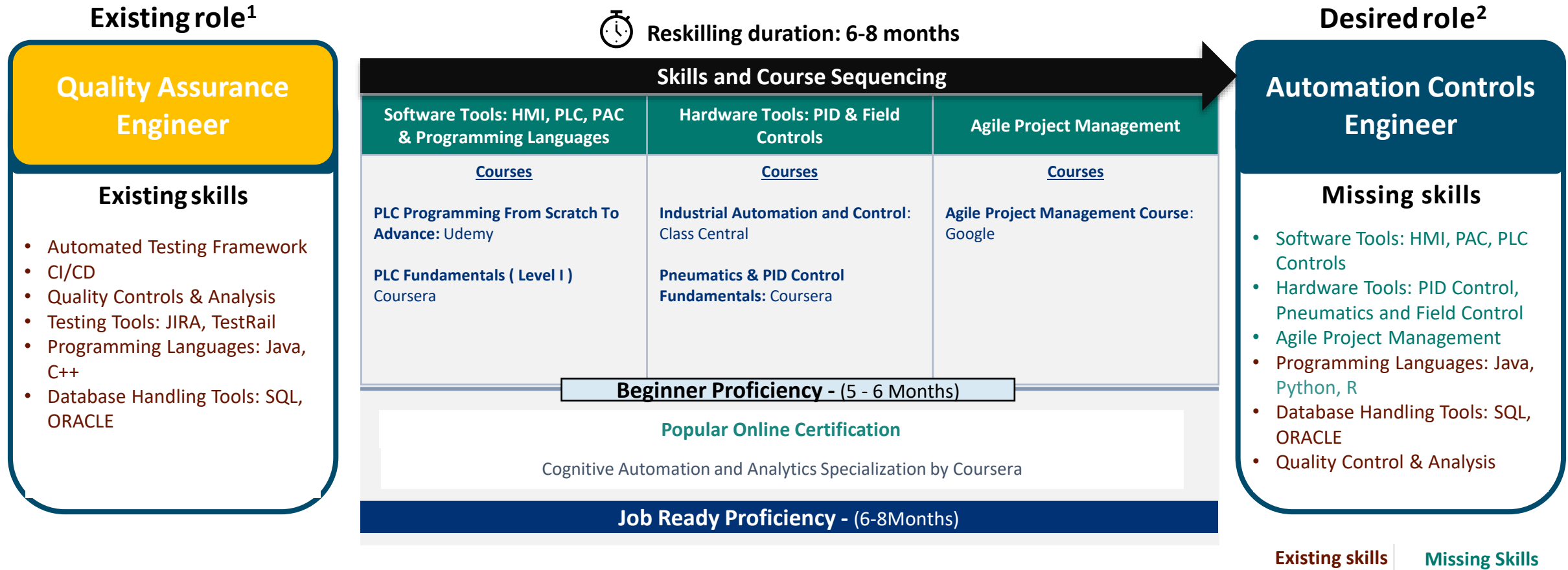
Favourability Score in Individual Parameter High Medium Low

1. Several other Reskilling parameters are considered in detailed analysis
 2. **Above job roles arranged using RPI or Reskilling Propensity Index**, Draup's Proprietary scoring index methodology for Reskilling which is based on detailed analysis of relevant parameters. RPI ranges from 1-10 score, where >5 score job roles are reskilled due to less overlapping skillsets, and >6.5 are upskilled due to a few overlapping skillset.

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Reskilling framework: A traditional 'QA Engineer' can step up to a 'Automation Controls Engineer' role with Programming & Hardware skills to solve unique business problems of Industrial Automation Industry

Sample Reskilling case study: A traditional 'QA Engineer' transitioning into a high demand 'Automation Controls Engineer' role



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1. Quality Assurance Engineer considered here should have 4+ years experience with high overlapping skill sets of Automation Controls Engineer
 2. During transition time (4-6 months), Reskilled Quality Assurance Engineer can be utilised to cater basic level Automation Controls Engineer workloads and can be trained simultaneously inhouse to gain advanced expertise

Note: Draup performs complex assessment around various other critical Reskilling parameters between existing and desired roles to understand skill gap and match it with relevant learning modules

About Draup: Draup uses Machine Learning models to perform analysis provided in the report, Global HR leaders of leading firms are leveraging Draup for taking Data-driven Talent decisions



Draup Capabilities & Data Assets



EMPOWERS DECISION MAKING IN

- Recruitment
- Strategic Workforce Planning
- Reskilling
- Diversity & Inclusion
- Peer Analysis
- Compensation & Benefits
- University Relations
- Mergers and Acquisitions

and diverse other use cases...

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Draup for Talent: Draup analyses 15+ Million data attributes every day to help global HR leaders in Planning, Hiring, and Reskilling their Future-Ready Workforce



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